

Center for Risk and Integrated Sciences

Editor's note: This is the second in a series of articles describing the four extramural program branches at the NIEHS.

The Center for Risk and Integrated Sciences (CRIS) is charged with guiding NIEHS extramural research in three main areas: hazardous substance research, “omics” research, and the development and application of emerging technologies in the environmental health sciences. The CRIS program administrators provide service in these areas under the leadership of William A. Suk.

CRIS's oldest program, the Superfund Basic Research Program (SBRP), was established in 1986 under the Superfund Amendment and Reauthorization Act. It incorporates biomedical and nonbiomedical research within an interdisciplinary framework. It also has a strong emphasis on interdisciplinary training at the graduate and postdoctoral level; translation of research findings to the environmental and public health community; and the fostering of strong partnerships with the U.S. Environmental Protection Agency and the Agency for Toxic Substances and Disease Registry.

In 2000, the NIEHS established the National Center for Toxicogenomics (NCT) and charged the Division of Extramural Research and Training with coordinating and harmonizing the Toxicogenomics Research Consortium (TRC), the extramural component of the NCT. Under this rubric, CRIS coordinates the institute's extramural efforts to define how the entire genetic complement of an organism responds to environmental agents. The NIEHS has also recognized the need to explore the biological complexity encoded by the genome by focusing on protein products and metabolic profiling. Accordingly, in support of the goal of reducing risk of exposure, CRIS has assumed the responsibility for fostering the development of portfolios of proteomics and metabolomics research. As these fields evolve, CRIS is positioned to transition this portfolio into the realm of systems biology.

In the emerging technology arena, CRIS represents the NIEHS in several trans-NIH program areas including bioengineering, nanosciences, and bioinformatics. Among the areas currently being emphasized are nanoscale technologies (including their potential applications in assessing exposure and risk) and the mechanisms by which exposure leads to the development and progression of disease.

CRIS coordinates activities and fosters cooperation on a national and international scale to enhance research efforts to reduce the uncertainty of risk. Toward that end, CRIS manages international programs on chemical safety and health, and coordinates environmental health programs in developing countries.



(left to right) Brenda Weis, William Suk, Kathy Ahlmark, Beth Anderson (not pictured: David Balshaw, Claudia Thompson)

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